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मानक

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“पुराने को छोड़ नये के तरफ”

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“Step Out From the Old to the New”

IS 211 (1992): Antimony Ingot [MTD 9: Lead, Zinc, Cadmium, Tin, Antimony and their Alloys]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

एन्टीमनी इंगट — विशिष्ट

(चौथा पुनरीक्षण)

Indian Standard

ANTIMONY INGOT — SPECIFICATION

(Fourth Revision)

UDC 629.75-412

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

FOREWORD

This Indian Standard (Fourth Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Lead, Zinc, Cadmium, Tin, Antimony and Their Alloys Sectional Committee had been approved by the Metallurgical Engineering Division Council.

This standard was first published in 1950 and was subsequently revised in 1956, 1966 and 1977. In this revision, the following modifications have been made:

- a) A separate clause on references has been made;
- b) Clauses on chemical analysis, and marking have been modified; and
- c) Requirements of test certificate has been included.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

ANTIMONY INGOT — SPECIFICATION

(Fourth Revision)

1 SCOPE

This standard covers the requirements of antimony in the form of ingots.

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard.

IS No.	Title
1047 : 1966	Methods of chemical analysis of antimony (<i>revised</i>)
1387 : 1967	General requirements for the supply of metallurgical materials (<i>first revision</i>)
1817 : 1961	Methods of sampling non-ferrous metals for chemical analysis

3 GRADES

This standard covers three grades of antimony ingots, namely Sb 99.8, Sb 99.5 and Sb 99.

4 SUPPLY OF MATERIAL

General requirements relating to supply of antimony ingots shall conform to IS 1387 : 1967.

5 MANUFACTURE

Antimony ingots shall be produced from the ore.

6 CHEMICAL COMPOSITION

6.1 The material shall conform to the chemical composition as specified in Table 1.

6.2 The chemical composition shall be determined either by the methods specified in IS 1047 : 1965 or any other established instrumental/chemical method. In case of dispute, the procedure specified in IS 1047 : 1965 shall be the referee method.

7 FREEDOM FROM DEFECTS

Ingots shall be reasonably free from slag and dross.

8 MASS

Unless specified otherwise, the mass of each ingot shall not exceed 25 kg.

Table 1 Chemical Composition of Antimony Ingots
(Clause 6.1)

Constituent (1)	Requirement		
	Grade Sb 99.8	Grade Sb 99.5	Grade Sb 99
	(2) %	(3) %	(4) %
Antimony, <i>Min</i> (by difference)	99.80	99.50	99.00
Lead, <i>Max</i>	0.15	0.20	0.50
Arsenic, <i>Max</i>	0.05	0.10	0.30
Iron, <i>Max</i>	0.05	0.10	0.20
Sulphur, <i>Max</i>	0.10	0.15	0.25
Copper, <i>Max</i>	0.05	0.10	0.10
Bismuth, <i>Max</i>	0.05	0.10	0.10
Nickel, <i>Max</i>	0.05	0.10	0.10
Tin, <i>Max</i>	0.05	0.10	0.10
Silver, <i>Max</i>	0.05	0.10	0.10

9 SAMPLING

9.1 Unless otherwise specified, 5 percent of the ingots shall be selected from each consignment representing same grade of antimony ingots produced under uniform condition of manufacture and offered for inspection at one time.

9.2 Samples for chemical analysis shall be prepared from ingots selected as per **9.1** in accordance with IS 1817 : 1961.

10 RETEST

10.1 If the sample prepared as per **9.2** and tested for chemical composition fails to meet the requirements specified under **6.1**, two more tests shall be conducted on the same sample in order to confirm that the analysis has been done properly. If both the test results satisfy the relevant requirements, the lot shall be accepted. Should either of the retest fail, the lot represented shall be deemed as not complying with this standard.

11 INSPECTION

11.1 All inspection and testing of antimony ingots covered in this standard shall be carried out by the manufacturer, unless otherwise agreed to between the manufacturer and the purchaser. The inspection requirements shall be stated in the enquiry and order.

11.2 The purchaser shall notify the supplier while placing the order, if it is his intention to inspect the material at the supplier's end. The supplier shall offer the purchaser all the necessary facilities for testing of antimony ingots in accordance with this standard. For this purpose the purchaser or his representative may, by prior arrangement, attend to inspect the antimony ingots, to select and identify the test samples for testing and to witness the testing.

12 MARKING

12.1 Each ingot shall be legibly marked with the following:

a) Cast/Lot number;

b) Grade of antimony ingots; and

c) Indication of the source of manufacture.

12.2 Standard Marking

Each ingot may also be marked with the Standard Mark.

13 TEST CERTIFICATE

The supplier shall provide test certificate for each consignment giving information like cast/lot and corresponding chemical composition etc.

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Bureau of Indian Standards

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